

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/974,710	10/09/2001	Peggy-Jean P. Flanigan	55526US003	7863
32692	7590 09/22/2004		EXAMINER	
3M INNOVATIVE PROPERTIES COMPANY PO BOX 33427			SIMONE, CATHERINE A	
	N 55133-3427		ART UNIT	PAPER NUMBER
,			1772	_

DATE MAILED: 09/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

			1/~
	Application No.	Applicant(s)	
	09/974,710	FLANIGAN ET AL.	
Office Action Summary	Examiner	Art Unit	
	Catherine Simone	1772	
The MAILING DATE of this communication ap Period for Reply	pears on the cover sheet w	vith the correspondence address -	-
A SHORTENED STATUTORY PERIOD FOR REPL THE MAILING DATE OF THIS COMMUNICATION. - Extensions of time may be available under the provisions of 37 CFR 1. after SIX (6) MONTHS from the mailing date of this communication. - If the period for reply specified above is less than thirty (30) days, a rep If NO period for reply is specified above, the maximum statutory period Failure to reply within the set or extended period for reply will, by statut Any reply received by the Office later than three months after the mailir earned patent term adjustment. See 37 CFR 1.704(b).	136(a). In no event, however, may a oly within the statutory minimum of thi will apply and will expire SIX (6) MO e, cause the application to become A	reply be timely filed rty (30) days will be considered timely. NTHS from the mailing date of this communica BANDONED (35 U.S.C. § 133).	ition.
Status			
1) Responsive to communication(s) filed on <u>02 J</u>	July 2004.		
_	s action is non-final.		
3) Since this application is in condition for allowards closed in accordance with the practice under the condition of the			sis
Disposition of Claims			
4) ☐ Claim(s) 1-8,10-17,19-22 and 25-60 is/are per 4a) Of the above claim(s) 36-52 is/are withdray 5) ☐ Claim(s) is/are allowed. 6) ☐ Claim(s) 1-8, 10-17, 19-22, 25-35 and 53-60 is 7) ☐ Claim(s) is/are objected to. 8) ☐ Claim(s) are subject to restriction and/or contents.	wn from consideration. s/are rejected.		
Application Papers			
9) The specification is objected to by the Examine	er.		
10)☐ The drawing(s) filed on is/are: a)☐ acc	cepted or b) objected to	by the Examiner.	
Applicant may not request that any objection to the	* * * * * * * * * * * * * * * * * * * *	· ·	
Replacement drawing sheet(s) including the correct 11) The oath or declaration is objected to by the Ex			` '
Priority under 35 U.S.C. § 119			
a) Acknowledgment is made of a claim for foreign a) All b) Some * c) None of: 1. Certified copies of the priority document 2. Certified copies of the priority document 3. Copies of the certified copies of the priority application from the International Burea * See the attached detailed Office action for a list	ts have been received. ts have been received in A rity documents have beer u (PCT Rule 17.2(a)).	Application No received in this National Stage	
Attachment(s)			
Notice of References Cited (PTO-892) Notice of Draftsperson's Patent Drawing Review (PTO-948) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)	Paper No(5) Notice of I	Summary (PTO-413) s)/Mail Date nformal Patent Application (PTO-152)	
Paper No(s)/Mail Date	6)		

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/2/04 has been entered.

Withdrawn Rejections

- 2. The objection of claims 59-62 and 67 of record in the Office Action mailed 3/2/04, Page 7, Paragraph 16 has been withdrawn due to the Applicants amendment filed 7/2/04.
- 3. The 35 U.S.C. 112 rejection of claims 1-8, 10-17 and 19-21 of record in the Office Action mailed 3/2/04, Pages 7-8, Paragraph #18 has been withdrawn due to the Applicants amendment filed 7/2/04.
- 4. The 35 U.S.C. 102 rejection of claims 22, 24, 26 and 27 as anticipated by Goepfert et al. of record in the Office Action mailed 3/2/04, Page 3, Paragraph #8 has been withdrawn due to the Applicants amendment filed 7/2/04.
- 5. The 35 U.S.C. 102 rejection of claims 28, 30 and 33-35 as anticipated by Calhoun et al. of record in the Office Action mailed 3/2/04, Pages 3-4, Paragraph #9 has been withdrawn due to the Applicants amendment filed 7/2/04.

Art Unit: 1772

6. The 35 U.S.C. 102 rejection of claims 53-55 as anticipated by Calhoun et al. of record in the Office Action mailed 3/2/04, Page 4, Paragraph #10 has been withdrawn due to the Applicants amendment filed 7/2/04.

Page 3

- 7. The 35 U.S.C. 102 rejection of claims 1-8 and 19-21 as anticipated by Mazurek et al. of record in the Office Action mailed 3/2/04, Pages 8-9, Paragraph #20 has been withdrawn due to the Applicants amendment filed 7/2/04.
- 8. The 35 U.S.C. 102 rejection of claims 56-58 as anticipated by Hata of record in the Office Action mailed 3/2/04, Page 9, Paragraph #21 has been withdrawn due to the Applicants amendment filed 7/2/04.
- 9. The 35 U.S.C. 102 rejection of claims 63-65 as anticipated by Sher et al. of record in the Office Action mailed 3/2/04, Page 10, Paragraph #23 has been withdrawn due to the Applicants amendment filed 7/2/04.
- 10. The 35 U.S.C. 103 rejection of claim 25 over Goepfert et al. in view of Hata of record in the Office Action mailed 3/2/04, Page 5, Paragraph 12 has been withdrawn due to the Applicants amendment filed 7/2/04.
- 11. The 35 U.S.C. 103 rejection of claim 23 over Goepfert et al. in view of Calhoun et al. of record in the Office Action mailed 3/2/04, Pages 5-6, Paragraph 13 has been withdrawn due to the Applicants amendment filed 7/2/04.
- 12. The 35 U.S.C. 103 rejection of claim 31 over Calhoun et al. in view of Goepfert et al. of record in the Office Action mailed 3/2/04, Page 6, Paragraph 14 has been withdrawn due to the Applicants amendment filed 7/2/04.

Art Unit: 1772

13. The 35 U.S.C. 103 rejection of claims 10, 12, 14, 15 and 66 over Mazurek et al. in view of Hata of record in the Office Action mailed 3/2/04, Pages 10-11, Paragraph 25 has been withdrawn due to the Applicants amendment filed 7/2/04.

14. The 35 U.S.C. 103 rejection of claims 11, 13, 16 and 17 over Mazurek et al. in view of Sher et al. of record in the Office Action mailed 3/2/04, Pages 11-12, Paragraph 26 has been withdrawn due to the Applicants amendment filed 7/2/04.

Claim Rejections - 35 USC § 102

15. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
- 16. Claims 1-8, 22, 25, 27 and 53-55 are rejected under 35 U.S.C. 102(b) as being anticipated by Ishikawa et al. (5,212,011).

Regarding **claim 1**, Ishikawa et al. discloses an article comprising at least one adhesive layer with a first major surface and a second major surface (Fig. 2, #3), wherein at least one of the first and second major surfaces is a structured surface (Fig. 2, #5); and a cap layer (Fig. 2, #2) laminated to the structured surface of the adhesive layer (see col. 4, lines 53-56) wherein the exposed surface of the cap layer is unstructured (see col. 3, lines 45-50). Regarding **claim 2**, note the cap layer (Fig. 2, #2) is a backing. Regarding **claims 3** and **4**, note the at least one adhesive layer comprises a pressure sensitive adhesive, i.e. vinyl ethers, (see col. 4, lines 56-58). Regarding **claim 5**, note the article has a thickness of about 2 μm to about 500 μm (see col. 4,

Art Unit: 1772

lines 60-65). Regarding **claim 6**, note the adhesive layer is a structured adhesive layer (Fig. 2, #3). Regarding **claim 7**, note at least one further non-adhesive layer (Fig. 7, #2) in contact with one of the first and second major surfaces. Regarding **claim 8**, note the article comprises a non-structured exposed surface (Fig. 2, #4; also see col. 3, lines 46-50).

Regarding **claim 22**, Ishikawa et al. discloses a tape comprising at least one pressure sensitive adhesive layer (Fig. 2, #3) comprising a first major surface and a second major surface, wherein the first major surface is a structured surface (Fig. 2, #5) and the second major surface is a non-structured surface; and a non-adhesive cap layer (Fig. 2, #2) laminated to the first major surface (see col. 3, lines 46-50 and col. 4, lines 53-56). Regarding **claim 25**, note the tape has a peel strength of at least 21-42 oz/0.5 inch for a thickness of 0.003 inches to 0.007 inches (see Table 1 and Table 2). Regarding **claim 27**, note the cap layer is a structured layer (Figs. 2 and 6, #2).

Regarding **claim 53**, Ishikawa et al. discloses an article comprising at least one first layer (Fig. 2, #2) with a first major surface and a second major surface, wherein at least one of the first and second major surfaces is a structured surface (Fig. 2, #5); and a cap layer (Fig. 2, #3) laminated to a structured surface of the first layer, wherein the cap layer comprises an adhesive having a non-structured exposed surface (see col. 3, lines 46-50 and col. 4, lines 53-56). Regarding **claim 54**, note the cap layer (Fig. 2, #3) is non-structured on both surfaces. Regarding **claim 55**, note the first layer comprises a polymeric film (see col. 4, lines 12-19).

17. Claims 1, 3-8 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Sekisui et al. (JP 07-090231).

Art Unit: 1772

Regarding **claim 1**, Sekisui et al. discloses an article comprising at least one adhesive layer with a first major surface and a second major surface (Fig. 1, #3), wherein at least one of the first and second major surfaces is a structured surface (Fig. 1, #2); and a cap layer (Fig. 1, #1) laminated to the structured surface of the adhesive layer wherein the exposed surface of the cap layer is unstructured (Fig. 1, #1). Regarding **claims 3** and **4**, note the adhesive layer is a pressure sensitive adhesive layer, i.e. acrylic (see abstract, line 12). Regarding **claim 5**, note the article has a thickness of about 2 µm to about 500 µm (see abstract, lines 10-13). Regarding **claim 6**, note the adhesive layer is a structured adhesive layer (Fig. 1, #3). Regarding **claim 7**, note at least one further non-adhesive layer in contact with one of the first and second major surfaces (Fig. 1, #4). Regarding **claim 8**, note a non-structured exposed surface (Fig. 1, #1). Regarding **claim 21**, note the second major surface is a structured surface, the cap layer (Fig. 1, #1) contacts the first major surface, and wherein the article further comprises a backing layer on the second major surface (Fig. 1, #4).

18. Claims 1-8, 11, 19, 20, 22, 26-35 and 53-55 are rejected under 35 U.S.C. 102(b) as being anticipated by Abe (WO 99/58620).

Regarding **claim 1**, Abe discloses an article comprising at least one adhesive layer with a first major surface and a second major surface (Figs. 3 and 4, #303 and #403), wherein at least one of the first and second major surfaces is a structured surface; and a cap layer (Figs. 3 and 4, #302 and #402) laminated to the structured surface of the adhesive layer (Figs. 3 and 4, #303 and #403) wherein the exposed surface of the cap layer is unstructured. Regarding **claim 2**, note the cap layer (Figs. 3 and 4, #302 and #402) is a backing. Regarding **claims 3** and **4**, note the at least one adhesive layer comprises a pressure sensitive adhesive, i.e. natural rubber, (see 8, lines 21-

Art Unit: 1772

23). Regarding **claim 5**, note the article has a thickness of about 2 μm to about 500 μm (see page 9, lines 8-10). Regarding **claim 6**, note the adhesive layer is a structured adhesive layer (Figs. 3 and 4, #303 and #403). Regarding **claim 7**, note at least one further non-adhesive layer (Fig. 4, #405) in contact with one of the first and second major surfaces. Regarding **claim 8**, note the article comprises a non-structured exposed surface (Figs 3 and 4). Regarding **claim 11**, note a plurality of channels (Figs. 3 and 4; also see page 10, lines 10-15). Regarding **claim 19**, note the cap layer is a laminate (Fig. 4, #401and #402). Regarding **claim 20**, note the second major surface is a non-structured surface (Fig. 4, #403), the cap layer (Fig. 4, #402) contacts the first major surface, and wherein the article further comprises a backing layer on the second major surface (Fig. 4, #405).

Regarding claim 22, Abe discloses a tape comprising at least one pressure sensitive adhesive layer (Figs. 3 and 4, #303 and #403) comprising a first major surface and a second major surface, wherein the first major surface is a structured surface and the second major surface is a non-structured surface; and a non-adhesive cap layer (Figs. 3 and 4, #302 and #402) laminated to the first major surface. Regarding claim 26, note a backing (Fig. 4, #405) adjacent the second major surface. Regarding claim 27, note the cap layer is a structured layer (Figs. 3 and 4, #302 and #402).

Regarding **claim 28**, note Abe discloses a laminate article comprising a first adhesive layer (Fig. 3, #303) having a first major surface and a second major surface, wherein at least one of the first and second major surfaces is a structured surface, and a second adhesive layer (Fig. 3, #302) having a first major surface and second major surface, wherein at least one of the first and second major surfaces is a structured surface, wherein the first adhesive layer and the second

Art Unit: 1772

adhesive layer are in contact. Regarding claim 29, note the first major surface of the first adhesive layer is a structured surface and the second major surface of the first adhesive layer is a non-structured surface (Fig. 3, #303), and the first major surface of the second adhesive layer is a structured surface and the second major surface of the second adhesive layer is a non-structured surface (Fig. 3, #302), and the second major surface of the first adhesive layer contacts the first major surface of the second adhesive layer. Regarding claim 30, note a backing (Fig. 3, #301) on the second major surface of the second adhesive layer (Fig. 3, #302). Regarding claim 31, note a cap layer (Fig. 4, #405) on the first major surface of the first adhesive layer (Fig. 4, #403). Regarding claim 32, note the first major surface of the first adhesive layer (Fig. 3, #303) contacts the first major surface of the second adhesive layer (Fig. 3, #302). Regarding claim 33, note a backing layer (Fig. 4, #405) on the second major surface of the first adhesive layer (Fig. 4, #403). Regarding claim 34, note the first adhesive layer has a first pattern of structures on the first major surface thereof (Fig. 4, #403) and the second adhesive layer has a second pattern of structures on the first major surface thereof (Fig. 4, #402), and wherein the first pattern is substantially aligned with the second pattern. Regarding claim 35, note the first pattern (Fig. 3, #303) is misaligned with the second pattern (Fig. 3, #302).

Regarding **claim 53**, Abe discloses an article comprising at least one first layer (Fig. 3, #302) with a first major surface and a second major surface, wherein at least one of the first and second major surfaces is a structured surface; and a cap layer (Fig. 3, #303) laminated to a structured surface of the first layer, wherein the cap layer comprises an adhesive having a non-structured exposed surface (Fig. 3, #303). Regarding **claim 54**, note the cap layer (Fig. 3, #303)

Art Unit: 1772

is non-structured on both surfaces. Regarding claim 55, note the first layer comprises a polymeric film (see page 8, lines 1-5).

Claim Rejections - 35 USC § 103

- 19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
 - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 20. Claims 10,12,14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa et al. (US 5,212,011) in view of Hata (WO 97/33946).

Ishikawa et al. discloses an article comprising at least one adhesive layer with a first major surface and a second major surface (Fig. 2, #3), wherein at least one of the first and second major surfaces is a structured surface (Fig. 2, #5); and a cap layer (Fig. 2, #2) laminated to the structured surface of the adhesive layer (see col. 4, lines 53-56) wherein the exposed surface of the cap layer is unstructured (see col. 3, lines 45-50). However, Ishikawa et al. fails to disclose the article comprising a plurality of discrete reservoirs, each reservoir having a void volume of less than 100 μ l and containing at least one deliverable or non-deliverable substance. Hata teaches in the analogous art a plurality of discrete reservoirs (Fig. 1a, #4), each reservoir having a void volume of less than 100 μ l (see page 7, lines 21-23) and containing at least one deliverable or non-deliverable substance (see page 3, lines 1-12) for the purpose of producing an article having at least one adhesive layer with a first major surface and a second major surface, wherein at least one of the first and second major surfaces is a structured surface. Therefore, it

Art Unit: 1772

would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have modified the adhesive article in Ishikawa et al. to comprise a plurality of discrete reservoirs, with each reservoir having a void volume of less than 100 µl and containing at least one deliverable or non-deliverable substance as suggested by Hata in order to produce an article having at least one adhesive layer with a first major surface and a second major surface, wherein at least one of the first and second major surfaces is a structured surface.

21. Claims 11, 13, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa et al. (US 5,212,011) in view of Sher et al. (US 6,197,397).

Ishikawa et al. discloses an article comprising at least one adhesive layer with a first major surface and a second major surface (Fig. 2, #3), wherein at least one of the first and second major surfaces is a structured surface (Fig. 2, #5); and a cap layer (Fig. 2, #2) laminated to the structured surface of the adhesive layer (see col. 4, lines 53-56) wherein the exposed surface of the cap layer is unstructured (see col. 3, lines 45-50). However, Ishikawa et al. fails to disclose a plurality of channels containing at least one deliverable or non-deliverable substance. Sher et al. teaches that it is old and well-known in the analogous art to have a plurality channels containing at least one deliverable or non-deliverable substance (see col. 5, lines 33-37) for the purpose of producing an adhesive article with a structured surface. Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have modified the adhesive layer in Ishikawa et al. to comprise a plurality of channels with at least one deliverable or non-deliverable substance as suggested by Sher et al. in order to provide a structured surface to an adhesive layer.

Art Unit: 1772

22. Claims 56-60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hata (WO 97/33946).

Page 11

Regarding claims 56 and 57, Hata discloses at least one adhesive layer (Fig. 1b, #10) with a first major surface and a second major surface, wherein at least one of the first and second major surfaces is a structured surface (Fig. 1b, #12), and the structure surface comprises a plurality of discrete reservoirs (Fig. 1b, #4). However, Hata fails to disclose the volume of each reservoir being less than about 20 nL and having a void volume of less than about 4 nL. Hata teaches the volume of each reservoir being within a range of 0.8 to 600 mm³ (see page 10, lines 30-32). Therefore, the optimum ranges for the volume and void volume of each reservoir would be readily determined through routine experimentation by one having ordinary skill in the art depending on the desired end results. Thus, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have modified the reservoirs in the adhesive sheet of Hata to each have a volume of less than about 20 nL and a void volume of less than about 4 nL, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art in absence of showing unexpected results. *MPEP 2144.05 (II)*.

Regarding **claims 58-60**, note the reservoirs contain at least one deliverable or non-deliverable substance (see page 3, lines 6-12).

Response to Arguments

23. Applicant's arguments with respect to claims 1-8, 10-17, 19-22, 25-35 and 53-60 have been considered but are most in view of the new ground(s) of rejection.

Art Unit: 1772

Conclusion

24. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Catherine Simone whose telephone number is (571)272-1501. The examiner can normally be reached on 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on (571) 272-1498. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Catherine Simone Examiner Art Unit 1772 September 15, 2004

SUPERVISORY PATENT EXAMINER

1/404